

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of: Sarah YOUNG	Examiner: Regina Liang
For: DISPLAY DEVICE	Art Unit: 2629
Filed: July 31, 2003	Confirmation No.: 3597
Serial No.: 10/632,348	

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REPLY BRIEF PURSUANT TO 37 C.F.R. § 41.41

SIR:

This paper is responsive to the Examiner's Answer dated May 13, 2009 in connection with the above-captioned application. For the reasons more fully set forth below and in the "Appeal Brief Pursuant to 37 C.F.R. § 41.37" ("the Appeal Brief"), it is respectfully submitted that the present rejections should be reversed.

As an initial matter, the paragraph spanning pages 6 and 7 of the Examiner's Answer makes plainly apparent that the rejections set forth in the Final Office Action are entirely based on improper hindsight. In this regard, the Examiner's Answer at page 7 highlights the fact that the rejections are based purely on improper hindsight, in that the Examiner's Answer states that "if appellant is using the material as taught by Wingert in his invention so that the display would be visible through the actuator, the material as taught by Wingert can be also modified into Franzen's actuator layer."

Furthermore, regarding the rejection of claim 1 under 35 U.S.C. § 103(a), the Examiner indicates, on page 2, paragraph 3 of the Final Office Action dated June 2, 2008 ("the Final Office Action"), as well as on page 3, paragraph 1 of the Examiner's Answer, that the layer (S1) of the touch-sensitive display described in WO 02/27645 ("Franzen"), in which layer (S1) a transparent, flexible sensor pad is situated, constitutes an actuator layer. However, as indicated on page 8, line 17 to 19 of the translation of WO 02/27645 ("the Translation"), the sensor pad merely detects when layer (S1) is touched and generates a first

signal indicating the Cartesian coordinates of the touch. Franzen nowhere indicates that layer (S1) includes an **actuator** or performs any actuating function. In contrast, as described from page 9, line 18 to page 10, line 7 of the Translation:

Underneath the second layer S₂ is located the third layer S₃, which is formed by an area-wide matrix of **piezoelectrically operated “knobs” N₁...N_m** configured as nylon or metal pins that are movably mounted vertically with respect to the film surface.

The three layers S₁, S₂, and S₃ are configured in such a way that **the piezoelectrically operated knobs N₁...N_m can punctiformly mechanically manipulate the first two layers S₁ and S₂**, so that the keypad boundaries and/or inscriptions of a virtual key block can be generated on the surface of the second layer by means of knobs N₁...N_m arranged side by side in an initial state and can be palpated therein. (Emphasis added).

In addition, as indicated on page 10 of the Translation, a touch screen includes a third layer S₃ having at least one controllable actuator, and the third layer S₃ is arranged such that the controllable actuator mechanically manipulates the first layer S₁. As is clear from the foregoing, the piezoelectric knobs N₁...N_m situated in layer (S3) of the touch-sensitive display serve as actuators, which can move layers S₁ and S₂ up and down, thereby forming key blocks of a keypad and optionally providing a user with tactile feedback. Thus, layer (S1) of Franzen cannot be considered to constitute an actuator layer.

Furthermore, Franzen does not disclose, or even suggest, that a display unit includes an actuator layer arranged on an outwardly facing side of a display. As is apparent from paragraph 5, extending from page 5 to page 6 of the Final Office Action, the Examiner apparently considers the side of the touch-sensitive display on which layer (S1) is situated to be an outwardly facing side of the display. However, as clearly set forth above, layer (S3), which is situated on a side of the display opposite to layer (S1), i.e., on an **inwardly facing side** of the display, is the only layer of the Franzen display that can reasonably be interpreted as an actuator layer. Accordingly, Franzen does not disclose or suggest the above-mentioned feature of claim 1 of the present Application. Moreover, the article “Hyper-Redundant Robot Manipulators Actuated by Optimized Binary Dielectric Polymers” (“Wingert et al.”) and U.S. Patent No. 6,373,472 (“Palalau et al.”) do not cure the deficiencies of Franzen for reasons adequately set forth in the Appeal Brief and past responses to the numerous Office Actions issued to date.

Regarding the rejection of claim 6 under 35 U.S.C. § 103(a), Franzen nowhere indicates that layer (S3) of the touch-sensitive display is transparent.

Regarding the rejection of claims 7 and 8 under 35 U.S.C. § 103(a), contrary to the assertions of the Examiner on page 4, lines 1 to 2 of the Final Office Action and page 5, lines 1 to 2 of the Examiner's Answer, Franzen does not disclose or suggest that a control signal generated by a computation device and/or a logic circuit includes an optical signal or light. The light grids discussed in the passage on page 11, lines 9 to 20 cited by the Examiner merely sense when light beams traveling between transmitter and receiver strips of the light grids are blocked, e.g., by a finger touching the light grids, and send a corresponding signal to a control unit μ P containing the coordinates of the blocked light beams. Franzen nowhere mentions that the light grids include a computation device or a logic circuit. In addition, the control unit μ P of Franzen, which may be considered a computation device, is nowhere said to transmit a control signal that includes an optical signal or light.

Regarding the rejection of claim 10 under 35 U.S.C. § 103(a), contrary to the assertions of the Examiner on page 4, lines 3 to 4 of the Final Office Action and page 5, lines 3 to 4 of the Examiner's Answer, Franzen does not disclose or suggest that a control signal generated by a computation device and/or a logic circuit includes an electromagnetic field. The passage on page 7, lines 14 to 22 cited by the Examiner merely indicates that pressure or movement of piezoelectric elements may generate a voltage signal, and that a voltage signal from a microprocessor may cause the piezoelectric elements to move. In addition, the passage states that electromagnetic elements may also be employed for Braille writing terminals. One example of an electromagnetic element, a solenoid, may be activated by a current signal or may emit a current signal in response to being deflected. However neither of piezoelectric and electromagnetic elements, which would be situated in layer (S3) of the touch-sensitive display, are said by Franzen to include a computation device and/or a logic circuit, and neither the voltage signal emitted by a piezoelectric element, nor the current signal emitted by a solenoid may be considered to include an electromagnetic field. Furthermore, Franzen nowhere mentions that a control signal generated by control unit μ P includes an electromagnetic field.

For at least the reasons indicated above and in the Appeal Brief, Appellants respectfully submit that the rejection of claims 1 and 6 to 25 set forth in the Final Office Action should be reversed.

Respectfully submitted,

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